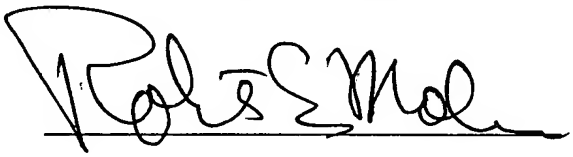
AF
ZMW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on July 18, 2005.

Robert E. Malm



In re Application of: MICHAEL L. BEIGEL et al. Serial Number: 10/064,380 Filing Date: 07/08/02 For: ELECTRONIC IDENTIFICATION SYSTEM WITH IMPROVED SENSITIVITY	Group Art Unit: 2635 Examiner: BRIAN A. ZIMMERMAN Telephone: (703) 305-4796

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

REQUEST FOR REHEARING

APPEAL NO. 2005-0171

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

With reference to Appeal No. 2005-0171, appellant requests a rehearing by the Board of Patent Appeals and Interferences pursuant to 37 C.F.R. § 41.52. Specifically, appellant requests

a reconsideration by the Board of its decision sustaining the examiner's rejection of claims 36, 39, 70, 71, 75, 47, 56, 57, 58, 59, and 60.

CLAIMS 36 AND 39

The examiner argues in his Answer (p. 5) that: "Buchele shows a reader with a coil 90, a capacitor 160 coupled to the coil. Buchele also shows the reader to include a means to drive the coil including four FETs arranged in a bridge to recycle the energy of the driver circuitry."

The Board interprets this statement as being an assertion by the examiner that "the Figure 2 structure of Buchele discloses a capacitor coupled to a coil with driving circuitry including a bridge circuit of four FETs as claimed. Decision on Appeal, p. 10.

The Board is incorrect in stating that what Appellants claim is "a capacitor coupled to a coil with driving circuitry including a bridge circuit of four FETs." Appellants' claim language translates into "driving circuitry (consisting of a bridge circuit of four FETs) coupled by a capacitor to a coil." Appeal Brief, p. 47, limitation [2] ("means for coupling the capacitor(s) to the coil") and limitation [3] {"means for driving the coil (bridge circuit of four FETs) through the capacitors"}.

What Buchele discloses is "driving circuitry (consisting of a bridge circuit of four FETs – output driver 110, Fig. 2) coupled directly to a coil (coil 190, Fig. 2). Buchele, col. 4, lines 36-42, col. 5, lines 59-68. Buchele does not disclose a capacitor coupling output driver 110 to coil 190 (*see* Fig. 2), and consequently does not disclose the capacitor of claim 36.

As Appellants emphasized in the Appeal Brief, p. 48, "The capacitor of limitation [1] does not exist in Buchele."

Reinforcing Appellants assertion that Buchele's storage capacitor 160 is not the

counterpart of the Appellants' limitation [1] capacitor are the facts brought forth under the limitation [2] discussion in the Appeal Brief, p. 48.

First of all, limitation [2] "a means for coupling the capacitor(s) to the coil" clearly falls within the *In re Donaldson* mandate. There is no structure disclosed in the claim for the coupling means. The Board seems to be confusing the "coupling means" of limitation [2] with the "driving means" of limitation [3]. There is nothing in limitation [3] that is structually relevant to the "coupling means".

The whole purpose of invoking an *In re Donaldson* analysis of limitation [2] was to ensure that the term "coupling" would not be interpreted so broadly as to mean sharing a DC power source, for example. The Examiner never provided a rationale as to why he believed Buchele's capacitor 160 was coupled to coil 190. He simply made the statement. Since the only obvious connective relationship between capacitor 160 and coil 190 was a connection to the DC power supply, we felt it advisable to invoke *In re Donaldson*.

As we emphasized in the Appeal Brief, p. 48, "capacitor 160 is not coupled to coil 190 either directly or by a transformer or an equivalent thereof." And we continued: "The connection of capaciotor 160 across the source 170 of DC power for driver 110 does not constitute the coupling of capacitor 160 to coil 190" based on an *In re Donaldson* analysis.

It is clear that Buchele's capacitor 160 is not the capacitor referred to in limitation[1] and utilized as specified in limitation[2].

With respect to the Board's "high power PWM signal" comment (Decision on Appeal, p. 10), Appellants identified Buchele's "high power PWM signal" as being the "driving signal for coil 190", thereby making the connection between Buchele's terminology and the claim terminology. When we said that Buchele does not disclose the "high power PWM signal . . .

feeding through capacitor(s) to coil 190", we were simply again making the point that Buchele does not disclose any capacitor(s) that are the counterpart(s) of Appellants' limitation [1] capacitor as further defined in limitations [2] and [3].

Buchele did not anticipate claims 36 and 39 and the Examiner's rejections should not be sustained.

CLAIM 70

The Board's conclusion regarding the patentability of claim 70 is based on an incorrect statement by the Examiner and should be reexamined.

The incorrect statement by the Examiner has to do with the function performed by Carroll et al.'s element 58:

> "The output of element 58 is a bit timing clock signal, the input to element 58 is the signal received from the reader, therefore the [bit timing] clock signal is inherently embedded in the signal transmitted from the reader." Examiner's Answer, p. 14.

Element 58 is an amplifier (Carroll et al., col. 12, lines 22-25). The output of element 58 is simply an amplified version of the 125-kHz interrogating signal received from the reader. The output of element 58 is NOT a bit timing signal (1.953 kHz) as the Examiner states but simply a "clock input signal [125 kHz] to timing control circuit 60" (Carroll et al., col. 12, line 24) which provides timing for all of the operations performed in the tag (Carroll et al., col. 12, lines 26-34) including a bit-timing clock signal supplied to Manchester encoder 70 to create the Manchester encoded signal that is transmitted to controller 10 (Carroll et al., col. 20, lines 33-42).

The Board rephrases the Examiner's erroneous conclusion that "the output of element 58 is a bit timing clock signal . . . [which] is inherently embedded in the signal transmitted from

the receiver" to the following:

> "We agree with the Examiner that the alternating magnetic field generated from the reader in Carroll . . . has embedded therein a bit timing clock signal as claimed . . . ."
>
> Decision on Appeal, p.13.

The issue here is clearly whether Carroll et al.'s alternating magnetic field that is generated for the purpose of interrogating a tag (Carroll et al.'s transponder 40) has embedded therein a bit-timing clock signal. In deciding this issue, we must determine (1) the nature of Carroll et al.'s alternating magnetic field, (2) the meaning of "embedded", and (3) the nature of Carroll et al.'s bit-timing signal that is, according to the Examiner and the Board, embedded in the alternating magnetic field. Let's take up each of these one by one.

Nature of Carroll et al.'s Alternating Magnetic Field

The only alternating magnetic field that is used for interrogating transponder 40 is a 125-kHx signal (a sine wave) which is transmitted initially and a 125-kHz/116.3-kHz signal which is transmitted after transponder 40 responds to the 125-kHx signal. The 125-kHz/116.3-kHz signal is a signal where the signal frequency changes back and forth between the two frequencies when data is being transmitted from controller 10 to transponder 40.

The bit-timing signal used by Carroll et al. in timing the transmission of data by transponder 40 is Q6, the 1.953-kHz generated by the divide-by-64 timing control 60. It is the only bit-timing clock signal disclosed by Carroll et al. There is no bit-timing clock signal disclosed in controller 10.

In drawing the conclusions set forth in the previous paragraph, it is important to define a "bit-timing clock signal". Persons skilled in the art understand a "clock signal" as being a periodic signal whose high-to-low or low-to-high transitions can be used to perform actions of

one sort or another. A "bit-timing clock signal" is a clock signal associated with the transmission or reception of a sequence of bits and consequently is a periodic signal having a frequency equal to the bit rate. Carroll et al. utilizes a bit-timing clock signal in transponder 40 to time the transmission of bits to controller 10. Carroll et al., col. 20, lines 33-42.

Must one have a bit-timing clock signal to transmit data? The answer is no and Carroll et al.'s controller 10 is an example of such a situation. Controller 10 transmits data in synchronism with the data received from transponder 40 (Carroll et al., col. 16, lines 36-41) and has no need for a bit-timing clock signal (like the one generated in transponder 40) and does not have one.

The dictionary meanings of "embedded" is (1) enclosed firmly in a surrounding mass; "found pebbles embedded in the silt"; "stone containing many embeddded fossils"; "peach and plum seeds embedded in a sweet edible pulp" and (2) inserted as an integral part of a surrounding whole; "confused by the embedded Latin quotations"; "an embedded subordinate clause".

The second definition seems more appropriate for a discussion of embedded signals. Where is the evidence of a 1.953-kHz bit-timing clock signal being an integral part of either of Carroll et al.'s interrogating signals. Carroll's initial 125-kHz interrogating signal (which provides the clock signal for generating the 1.953-kHz bit-timing clock in transponder 40) consists of a single 125 kHz frequency component. There is no 1.953-kHz frequency component that is an integral part of the 125-kHz signal. Even the 125kHz/116.3-kHz signal (which is transmitted after the generation of the 1.953-kHz is well-established in transponder 40) does not have a 1.953-kHz component buried within it.

The Examiner seems to concede that there is no bit-timing clock signal embedded in Carroll et al.'s interrogating signals by observing that "the data from the reader to the tag has embedded data related to the bit timing signal." Examiner's Answer, p. 15. However, embedded

data related to a bit-timing signal is not an embedded bit-timing signal.

Carroll et al. did not anticipate claim 70 and the Examiner's rejections should not be sustained.

CLAIM 71

The only reason given by the Board for not considering the preamble as a claim limitation is that "there is no clear indication or requirement that such a bit-timing clock signal [i.e. the one referred to in the main body of the claim and originating with the interrogator] corresponds to the bit-timing clock signal referenced in the preamble." Decision on Appeal, p. 14.

The Board is mistaken. The "clear indication" is provided in the preamble by referring to the bit-timing clock signal to which the tag-generated bit-timing signal is synchronized as "a bit-timing clock signal originating with the interrogator."

The preamble includes information regarding the timing of the bits in the response from a tag and thus places limitations on the acts required to perform the "extracting data" limitation. For this reason, the preamble cannot be ignored in determining the patentability of claim 71.

The Board states:

> "[T]he claimed clock signal generating feature is met by the encoder (70) in the transponder of Carroll since the body of the claim does not require that the clock signal generation originate at the reader."

But if the bit-timing clock signal is generated by the tag, how does the interrogating apparatus perform the step of "generating an alternating magnetic field in which the bit-timing signal is embedded" when a communication link from the tag to the interrogating apparatus has not yet been established?

In order to better illustrate why the generation of a bit-timing clock signal by Carroll et al.'s transponder 40 is not a disclosure of the claim-71 "bit-timing clock signal generation" limitation of claim 71, we show below in italics the sequence of events in interrogating a tag according to claim 71 together with the implications of each event following in regular type.

generating a bit-timing clock signal;

This step must be done by the interrogating apparatus and it must be done first since the result of this step must be available in performing the next step. It cannot be done by the tag since there is no communication link established with the tag when the interrogating process is initiated.

generating an alternating magnetic field in which the bit-timing signal is embedded;

This step also must be performed by the interrogating apparatus since it is the way in which the interrogating apparatus gets the attention of any tag in its vicinity.

[the tag] responding to an interrogation by transmitting a sequence of bits, the start of each bit being determined by a bit-timing clock signal generated by the tag and synchronized with a bit-timing clock signal originating with the interrogator;

This step by the tag can only be performed after receiving the interrogating signal from the interrogating apparatus. It is necessary for the tag to extract the bit-timing clock signal embedded in the alternating magnetic field in order to send data to the interrogating apparatus in accordance with the claim-71 preamble.

extracting data transmitted by the tag utilizing the bit-timing clock signal.

The "bit-timing clock signal" referred to here is obviously the one which was generated in the first step of the interrogating method.

The Board's statement that "[T]he claimed clock signal generating feature is met by the encoder (70) in the transponder of Carroll since the body of the claim does not require that the clock signal generation originate at the reader" is incorrect. The body of the claim implicitly requires (as demonstrated above) that the clock signal generation occurs at the reader

Appellants' comments concerning the alleged disclosure of the claim-70 "embedding a bit-timing clock signal" limitation by Carroll et al. (see discussion under the claim-70 heading above) are also applicable to the similar limitation in claim-71.

Carroll et al. did not disclose all of the limitations of claim 71 and the Examiner's rejection should not be sustained.

CLAIM 75

The primary basis for the Board's sustaining the rejection of claims 70, 71, and 75 is a belief that a bit-timing clock signal is embedded in the alternating magnetic field generated by Carroll et al.'s controller 10. Decision on Appeal, p. 13.

The Carroll et al. interrogating process consists of the following steps. Those performed by controller 10 are shown in boldface italics. Those performed by transponder 40 are shown in regular italics.

1. generating an unmodulated magnetic field having a frequency of 125 kHz (controller 10, step 214) and waiting for response from transponder 40 (controller 10, step 218);

2. amplifying received 125-kHz signal (transponder 40, amplifier 58);

3. generating bit-timing clock signal by dividing 125-khz amplified signal by 64 (transponder 40, divide-by-64 timing control 60);

4. transmitting data to controller 10 on 62.5-kHz signal (transponder 10, PSK modulator 72);

5. determining received bit value (controller 10, steps 232-316);

6. transmitting bit value (controller 10, steps 338-372;

***7. repeating "determining received bit value" and "transmitting bit value" for each received* bit (controller 10).**

The output of Carroll et al.'s divide-by-64 timing control 60 in transponder 40 is the bit-timing clock signal referred to in step 3 above. Carroll et al.'s transponder 40 generates a bit-timing clock signal and transmits it to controller 10 as sync block 102 in configuration word 100 (Fig. 4A). Sync block 102 consists of four "0's" which, after being converted to Manchester line codes, become a square wave having a frequency equal to the bit rate. This square wave is used by controller 10 as the bit-timing clock signal in extracting the other parts 106, 108, and 110 of configuration word 100 from the carrier transmitted by transponder 40.

There is nothing in Carroll et al. that suggests that this signal is embedded in the 125-kHz alternating magnetic field that is generated by controller 10. However, even if the bit-timing clock signal were embedded in the 125-kHz magnetic field, it would occur as part of step 5 AFTER the bit-timing clock signal of step 3 had been generated and used in the transmission of data to controller 10.

The 125-kHz signal received by transponder 40 and used by the divide-by-64 timing control 60 in generating the 1.953 kHz bit-rate timing signal does not have any signals or data embedded in it. It is simply a 125-kHz sine wave.

Appellants comments concerning the alleged disclosure of the claim-70 "embedding a

bit-timing clock signal" limitation by Carroll et al. (see discussion under the claim-70 heading above) are also applicable to the similar limitation in claim 75.

Carroll et al. did not anticipate claim 75 and the Examiner's rejection should not be sustained.

in re DONALDSON ANALYSIS OF CLAIMS 70, 71 & 75

The Board cites the concurring opinion of Judge Rader in *Seal-Flex Inc. v. Athletic Track and Court Construction,* 172 F.3d 836, 50 U.S.P.Q.2d 1225 (Fed. Cir. 1999) in concluding that the elements of claims 70, 71, and 75 are not step-plus-function elements and therefore do not invoke 35 U.S.C. § 112, ¶ 6.

Appellants are of the opinion that the Board misreads Judge Rader's opinion and that the aforementioned claim elements are step-plus-function elements and therefore do invoke 35 U.S.C. § 112, ¶ 6.

The Board cites the following paragraph from Judge Rader's decision as being particularly significant.

> "In general terms, the 'underlying function' of a method claim element corresponds to what that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. 'Acts,' on the other hand, correspond to how the function is accomplished. Therefore, claim interpretation focuses on what the claim limitation accomplishes, i.e., it's underlying function, in relation to what is accomplished by the other limitations and the claim as a whole. If a claim element recites only an underlying function without acts for performing it, then § 112, ¶ 6 applies even without express step-plus-function language." *Id.* F.3d at 849, USPQ2d at 1234.

The Board applied this passage to the problem at hand by stating:

"[I]t is our view that the underlying function set forth in claims 70 and 71, and what is

accomplished by the claim as a whole, is the interrogation of a tag." Decision on Appeal, p. 17.

Even though Judge Rader states that "In general terms, the 'underlying function' of a method claim **element** [emphasis added] corresponds to what that element ultimately accomplishes" and "claim interpretation focuses on what the claim **limitation** [emphasis added] accomplishes, i.e., it's underlying function, in relation to what is accomplished by the other limitations and the claim as a whole", the Board somehow concludes that Judge Rader's "underlying function" has to do with the claim as a whole rather than with each limitation of the claim.

It would seem that a careful reading of the paragaraph quoted by the Board from Judge Rader's Opinion would be sufficient in itself to convince the Board of its error. In case it does not, we offer additional material from Judge Rader's opinion which elaborates on Judge Rader's statement that "the 'underlying function' of a method claim element corresponds to what that element ultimately accomplishes."

In his analysis of claim 1 of the patent at issue in *Seal-Flex*, Judge Rader states: "Although claim 1 recites several 'steps' 'for constructing an activity mat over a foundation', the recitation of the overall function of the claim in the preamble does not suffice to convert each element into an act for performing that function so as to preclude application of § 112, ¶ 6. *Id.* F.3d at 849-50, USPQ2d at 1234-35.

And yet this approach, proscribed by Judge Rader, is the one taken by the Board when it concludes that each step recited in claims 70, 71, and 75 are merely acts for performing the underlying function of the claim—the interrogation of a tag.

Judge Rader further illustrates his point in his discussion of claim 1 of the patent at issue in the *Seal-Flex* case which recites "A method for constructing an activity mat over a foundation

comprising the steps of . . . *spreading an adhesive tack coating for adhering the mat to the foundation over the foundation surface.*" Judge Rader points out that "spreading an adhesive tack coating" is an "act" introduced by the words "comprising the steps of" and "adhering the mat to the foundation over the foundation surface" is the function—the result achieved by performing the claimed act of "spreading." Judge Rader observes that this limitation does not invoke § 112, ¶ 6 becaused it recites more than a function, "namely the claimed act of spreading". *Id.* F.3d at 849-50, USPQ2d at 1234-35..

Judge Rader goes on to say that "if the limitation had claimed 'a step for adhering the mat to the foundation' without the aditional recitation of an act or acts for 'adhering', then § 112, ¶ 6 would have governed its interpretation. Likewise, if this claim limitation had specified only the underlying function, namely, 'adhering the mat to the foundation', without recital of specific acts for 'adhering', § 112, ¶ 6 would have governed, despite the lack of 'step for' language. *Id.* F.3d at 849-50, USPQ2d at 1234-35.

Note how the limitations of appellants' claims 70, 71, and 75 are all in the format of "adhering the mat to the foundation" and in the view of Judge Rader, would invoke § 112, ¶ 6.

The Board erred in refusing to invoke § 112, ¶ 6 in its analysis of the patentability of claims 70, 71, and 75. Appellants' request the Board to reconsider its descision to sustain the rejections of claims 70, 71, and 75 in the light of the above arguments concerning the applicability of § 112, ¶ 6 and the acts and circuitry of Carroll et al. as compared to those disclosed in appellants' specification.

CLAIMS 47 AND 56

The Board's view that "transponder 40 in Carroll receives from the reader 10 a

transmitted signal which has embedded therein a bit-timing clock signal" (Decision on Appeal, p. 26) is based on an erroneous conclusion by the Examiner that "the output of element 58 is a bit timing clock signal, the input to element 58 is the signal received from the reader, therefore, the clock signal is inherently embedded in the signal transmitted from the reader." Examiner's Answer, p. 14

Element 58 is identified in Carroll et al. as an amplifier which amplifies the incoming signal from controller 10 to a level where it can serve as "a clock input signal to timing control circuit 60. Col. 12, lines 22-25. The Examiner wrongly assumed that what Carroll et al. refers to as a "clock input signal" is the same as the "bit-timing clock signal" that appears in Appellants' claims. It is not. The output of element 58 is simply an amplified version of the input 125-kHz signal that is received from controller 10 at the beginning of the interrogation process (prior to the transmission of data by controller 10). This 125-kHz clock signal drives the divide-by-64 timing control 60 which generates the 1.953 kHz bit-timing clock signal used by transponder 40 in timing the transmission of data bits to controller 10. Note that the divide-by-64 timing control 60 performs a generating process, i.e. creates a new and different signal that was not present in the original input signal.

Element 58 is not some magical device that extracts an embedded 1.953 bit-timing clock signal from a 125-kHz carrier which has no such embedded signal.

Appellants also take issue with the Board in their reliance on the Examiner's statement that "the transponder of Carroll is synched to the bit-timing signal embedded in the driver signal because the sync element 70 forces this to occur." Examiner's Answer, p.24.

The claim language requires the existence of both a generated bit-timing clock signal and an extracted version of an embedded bit-timing clock signal. The only bit-timing clock signal

involved in driving Manchester encoder and sync generator 70 is the one generated by the divide-by-64 timing control 60. There is no embedded bit-timing clock signal to which this generated bit-timing clock signal could be synchronized. And note that there are no elements shown in Carroll et al.'s Fig.3 which show the synchronization of a generated bit-timing clock signal and an extracted version of an embedded bit-timing clock signal being accomplished nor is such an operation disclosed in Carroll et al.

Claims 47 and 56 requires a means for generating a bit-timing clock signal that is sycnchronized to a bit-timing clock signal embedded in the transmitted signals. This requirement can be rephrased (without narrowing or broadening the claim language) as a means for (1) generating a bit-timing clock signal, (2) extracting the embedded bit-timing clock signal from the received carrier signal, and (3) causing the high-to-low transitions of the generated bit-timing clock signal to coincide with those of the extracted bit-timing clock signal.. Carroll et al. discloses the divide-by-64 timing control 60 which generates a 1.953-kHz bit-timing clock with high-to-low transitions aligned with every 64'th high-to-low transition of the 125-kHz carrier but the 125-kHz carrier is not an extracted 1.953-kHz bit-timing clock signal and the alignment of the generated 1.953-kHz bit-timing clock signal with some of the transitions of the 125-kHz carrier is not the same as the alignment with all of the transitions of an extracted 1.953-kHz bit-timing clock signal.

There is no bit-timing clock signal embedded in the signal received by transponder 40 from controller 10, and there is no basis for rejecting claims 47 and 56 based on the Carroll et al. patent.

CLAIM 57

The Examiner argues that claim 57 "requires a first phase for a '0' and a second phase for a '1' but does not require that the phase be constant for the entire bit period." Examiner's Answer, p. 25.

The Examiner is incorrect. The claim requires the phase of the driving signal to have a first phase **when a "0" bit is being transmitted** and to have a second phase **when a "1" bit is being transmitted**. The transmission of a bit is accomplished by transmitting a particular signal during a period of time called the bit period. Typically, the duration of the particular signal equals the bit period but it can be less. The transmission of a bit begins with the start of the particular signal and ends with the end of the particular signal. The bit is "being transmitted" for the duration of the particular signal that represents the bit, the signal duration typically being the same as the bit period. There is no other reasonable interpretation.

The Examiner's interpretation of claim 57 is not only contrary to the straightforward grammatical interpretation of the language, but unreasonable. The Examiner's assertion that claim 57 "requires a first phase for a '0' and a second phase for a '1' but does not require that the phase be constant for the entire bit period" would have the effect of claim 57 having no meaning whatsoever. Every driving signal has a phase and consequently every driving signal would fall within the bounds of claim 57 (as interpreted by the Examiner), regardless of how the phase of the driving signal varied during the bit period.

CLAIMS 58-60

The Examiner implied in his argument with respect to claim 57 that the argument was also applicable to claims 58-60. Examiner's Answer, p. 25, ("claim 57 being used as a

representative example . . . ."). The Board apparently took the Examiner at his word and sustained the Examiner's rejection of claims 58-60 without independently reviewing the claims and comparing them with claim 57. Nor, apparently, did the Board consult Appellants' Appeal Brief where the different claims are discussed in some detail in the context of the Carroll et al. patent. The concluding paragraphs of the Appeal Brief arguments for the patentability of claims 58-60 are reproduced below.

Appeal Brief, p.156 (concluding paragraph of claim-58 argument)

> Rather than responding to appellants' arguments concerning the patentability of this claim, the examiner suggests that his arguments with respect to claim 57 are also applicable to claim 58. 01/15/04 Office Action, pp. 24. However, this is not true. Claim 57 has to do with causing the "driving signal" to have specific phase values depending on which bit value is being transmitted while claim 58 has to do with causing a "periodic signal" to have specific phase values depending on which bit value is being transmitted and then modulating the "driving signal" with this "periodic signal". Thus, the modulation technique prescribed in claim 58 is very different from the Manchester-encoded PSK and FSK techniques disclosed by Carroll et al. Please see discussion under the **CLAIM 7** heading which argues the patentability of the same limitation in connection with a reader.

Appeal Brief, p.157-58 (concluding paragraph of claim-59 argument)

> Rather than responding to appellants' arguments concerning the patentability of this claim, the examiner suggests that his arguments with respect to claim 57 are also applicable to claim 59. 01/15/04 Office Action, pp. 24. However, this is not true. Claim 57 has to do with causing the "driving signal" to have specific phase values depending on which bit value is being transmitted while claim 59 has to do with causing a "periodic signal" to have specific phase values depending on which bit value is being transmitted and then amplitude modulating the "driving signal" with this "periodic signal". Thus, the modulation technique prescribed in claim 59 is very different from the Manchester-encoded PSK and FSK techniques disclosed by Carroll et al. Please see discussion under the **CLAIM 8** heading which argues the patentability of the same limitation in connection with a reader.

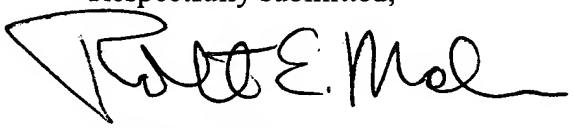
Appeal Brief, p.159 (concluding paragraph of claim-60 argument)

> Rather than responding to appellants' arguments concerning the patentability of this

claim, the examiner suggests that his arguments with respect to claim 57 are also applicable to claim 60. 01/15/04 Office Action, pp. 24. However, this is not true. Claim 57 has to do with causing the "driving signal" to have specific phase values depending on which bit value is being transmitted while claim 60 has to do with causing a "periodic signal" to have specific phase values depending on which bit value is being transmitted and then phase modulating the "driving signal" with this "periodic signal". Thus, the modulation technique prescribed in claim 60 is very different from the Manchester-encoded PSK and FSK techniques disclosed by Carroll et al. Please see discussion under the **CLAIM 9** heading which argues the patentability of the same limitation in connection with a reader.

Since the Examiner has been exposed to the above arguments several times (01/15/04 Office Action, Appeal Brief) and has never presented counter arguments, Appellants suggest that it would be appropriate for the Board NOT to sustain the Examiner in his rejections of claims 58-60.

Respectfully submitted,



Robert E. Malm
Reg. No. 34,662

16624 Pequeno Place
Pacific Palisades, CA 90272
Tel. No: (310) 573-1781